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enamel can be spun around the edges of the cover glass easily and quickly, and then the preparation is a permanent one. Only one layer of enamel is necessary. I think any kind, or color, of enamel can be successfully used. I have used two different kinds and both seem satisfactory.

A precaution should be taken that the solution is not so thick that it will harden at the edge of the cover before the bubbles are all driven off.

I have been using this medium, and method of mounting, for about six months. The objects which I have mounted seem to be in perfect condition at present. If time and changing temperature should loosen the cover glasses I think that my method might be changed with advantage by putting a ring of gold size around first, and following this by a second coat, or a coat of enamel.

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#### A METHOD FOR CUTTING PLANORBIS EGGS

The eggs of *Planorbis*, a common pond snail, are found in clusters held together by tough enclosing membranes which contain a considerable amount of jelly. Surrounded by the jelly are perhaps a couple of dozen capsules, each filled with a yellow albumen mass in which the egg develops. These membranes and the albumen make it very difficult to section the entire cluster, so that it has usually been necessary to remove the eggs from the albumen and jelly. Holmes (*Journal of Morph.*, Vol. 16, 1900) recommended for the process that they be teased out in physiological salt solution to which a trace of picric acid had been added.

The difficulties, however, in the process of staining and running through the alcohols of so small a number of eggs which are microscopic in size led to further experiments on cutting the eggs within the jelly mass. The procedure which was developed for this purpose has proven fairly successful, although certain precautions are necessary.

For fixing the eggs, Kleinenberg's picro-sulphuric has been chiefly employed. Owing to the tough membranes a longer time than is ordinarily given to mollusc eggs is necessary for the proper fixation; about one hour has proven a satisfactory time. The ad-

dition of a small percentage of acetic acid is perhaps an advantage. It is well also to puncture the enclosing membranes to insure a quick penetration. Especial care must be paid to this matter of fixation, for the tough membranes tend to interfere with the process.

The fixative should be washed out of the eggs in 70% alcohol to which lithium carbonate has been added. If the dish containing the eggs is kept in a warm place and the alcohol changed several times, forty-five minutes to an hour will be sufficient for the washing. The egg masses should then be transferred to 80% alcohol for a few minutes. To clear the egg masses they should be placed in creosote directly from the 80% alcohol. The success of this method depends to a large extent upon avoiding the use of higher grade alcohols and xylol; (even the 80% should be used for only a few minutes.)

As soon as the eggs have cleared in the creosote (which takes place in less than half an hour) they must be removed and rinsed for a short time in chloroform. If they remain long in the creosote they are hardened and toughened. After running through a chloroform-paraffin mixture, the eggs are infiltrated for about one hour in fairly strong rubber paraffin (J. B. Johnston, *Journal Appl. Microsc.* Vol. VI). Care is necessary there that the temperature does not rise higher than actually necessary. The entire process from fixation to embedding should all be concluded the same day if satisfactory results are to be expected.

Since the jelly in the sections stain readily, the best stain so far tried with these sections is thionin which is selective between the eggs and the jelly. The sections are stained in .5% aqueous solution of thionin for twelve to eighteen hours, and then differentiated in a weak solution of Orange G in 95% alcohol, quickly dehydrated and cleared, and then mounted as usual. Thionin, of course, has the objection that it is not lasting; otherwise its use proves quite satisfactory. For more lasting preparation, the usual staining methods may be used, but the fact that with them the jelly stains readily renders their use less desirable.

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